CANADA
DEPARTMENT OF MINES
MINES BRANCH
HON. W. TEMPLEMAN, MINISTER; A. P. LOW, LL.D., DEPUTY MINISTER;
EUGENE HAANEL, PH.D., DIRECTOR.

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THE

PRODUCTION OF IRON AND STEEL

IN

CANADA

During the Calendar Years

1907 AND 1908

BY

JOHN McLEISH, B.A.
Chief of the Division of Mineral Resources and Statistics

OTTAWA
GOVERNMENT PRINTING BUREAU
1909

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ADVANCE CHAPTER OF THE ANNUAL REPORT ON THE MINERAL PRODUCTION OF CANADA DURING THE CALENDAR YEARS 1907 AND 1908.

(Tons used throughout this report are short tons of 2,000 lbs., except where otherwise stated.)

IRON AND STEEL.

INTRODUCTION.

The accompanying statistical review of the iron industry in Canada is divided into two sections; the first dealing with the production of iron ores, and the second with the production of pig iron and steel.

Although iron ores are of wide occurrence throughout Canada, being found in practically every province, and in many cases in undoubted quality and quantity, nevertheless, the development of our iron ore deposits has not kept pace with the growth of our iron metallurgical industries.

The total production of iron ore in Canada up to date, has probably not exceeded 5,000,000 tons, while our present rate of production varies from 300,000 to 400,000 tons per annum.

Newfoundland, where we obtain from 650,000 to 700,000 tons per annum for use at Sydney—is producing close to 1,000,000 tons per year. Since 1896, or during the past thirteen years, we have imported nearly 3,000,000 tons of ore, chiefly from Newfoundland and the south shore of Lake Superior, for use in our Canadian smelters. The reasons for this large importation of ores, when we have apparently such important and extensive deposits of our own, are, probably, chiefly economic.

In Nova Scotia the Newfoundland ores can be laid down at Sydney more cheaply and more certainly than the local ores, while in Ontario, although numerous iron ranges are known across the northern portion of the Province north of Lakes Superior and Huron, questions of transportation have undoubtedly delayed their development in some cases, while in others the ores are of too low grade to compete with the other sources of supply.

At the present time there are in Canada about seven or eight producing mines, and of these, only one, the Helen mine, is producing over 100,000 tons per annum.

During the past few years the Mines Branch has been carrying on special investigations into the iron ore resources of Canada, and the following reports have already been published:—

The Iron Ore Deposits of Nova Scotia, by Dr. J. E. Woodman.

The Iron Ore Deposits of Thunder Bay and Rainy River District, Ontario, by F. Hille, M.E.

The Tungsten Ores of Canada, by Dr. T. L. Walker.

Chrome Iron Ore Deposits of the Eastern Townships, Quebec, by Fritz Cirkel, M.E.

Iron Ore Deposits along the Ottawa (Quebec side) and Gatineau Rivers, Quebec, by Fritz Cirkel, M.E.

Iron Ore Deposits of Vancouver and Texada Islands, by Einar Lindeman, M.E.

The production of pig iron and steel in Canada has become an important industry, though dependent to a very large extent on imported supplies of ore and fuel. The growth of the industry has no doubt been greatly stimulated by the payment of bounties on the part of the Dominion government. Production is as yet confined to the eastern half of Canada, chiefly in the provinces of Ontario and Nova Scotia. There are sixteen completed blast furnaces, with a total daily capacity of about 2,665 tons.

The general business depression of 1908 resulted in only a slightly decreased production of pig iron in that year, while a rapid recovery is indicated by the greatly increased rate of production being maintained during the early months of 1909. The rapid growth of population, the extensive railway construction being undertaken, the replacement of wooden bridges by steel on old railways, and the increasing use of steel in building construction, all mean a great increase in our consumption of iron and steel goods, so that in 1908, although our own furnaces turned out 630,835 tons of pig iron, we imported in addition over a million tons of iron and steel.

A summary of the chief statistics of the production of iron ore, pig iron, and steel are given hereunder, while many details will be found in subsequent pages.

Statistical Summary of Iron Ore, and Iron and Steel Production, 1907-8.

Material.	1907.	1908.
	Short Tons.	Short Tons.
Iron ore shipped	312,856	238,082
Canadian iron ore charged to furnaces	244,104	209,266
Imported " "	1,117,260	1,051,445
Pig iron made	651,962	630,835
Steel ingots and castings made	706,982	588,763
Finished rolled iron and steel products made (a)	672,200	566,099
Canadian coke charged to iron furnaces	521,068	492,076
Imported " "	327,082	325,670
Pig iron imported	(b) 150,157	(c) 212,290
Iron and steel goods imported	(b) 632,868	(c) 851,843

(a) Statistics collected and published by American Iron and Steel Association.
(b) Nine months ending March, 1907.
(c) Twelve months ending March, 1908.
The figures given do not show the total quantities of iron and steel goods imported, as in many cases the quantities are not given in the trade returns.

IRON ORE.

The total production (shipments) of iron ore from mines in Canada in 1908 was 238,082 tons valued at $568,189 at shipping point, as compared with 312,856 tons valued at $666,941 in 1907, and 248,831 tons valued at $522,242 in 1906. By provinces the production during the past three years was as follows:—

IRON.—TABLE 1.

Production of Iron Ore by Provinces, 1906-7-8.

Provinces.	1906.		1907.		1908.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
		$		$		$
Nova Scotia	97,820	151,386	89,839	137,161	11,802	17,620
Quebec	9,933	32,938	12,748	34,956	10,103	22,094
Ontario	141,078	337,918	207,769	488,324	216,177	528,475
British Columbia			2,500	6,500		
	248,831	522,242	312,856	666,941	238,082	568,189

The production during 1907 and 1908, classified as magnetites, hematites (including brown ores), carbonates and bog ores, was as follows:—

IRON.—TABLE 2.

Classified Production of Iron Ore, 1907-8.

Character of Ore.	1907.			1908.		
	Short Tons.	Value.	Per Ton.	Short Tons.	Value.	Per Ton.
		$	$ cts.		$	$ cts.
Magnetite	50,073	106,252	2 12	49,946	124,534	2 49
Hematite	205,795	473,532	2 30	173,164	416,127	2 40
Carbonate	42,740	47,701	1 11	4,869	5,434	1 12
Bog	14,248	39,456	2 77	10,103	22,094	2 19
	312,856	666,941	2 13	238,082	568,189	2 39

The decreased ore production in 1908, as compared with 1907, was chiefly in hematite and carbonate ores. The latter are used extensively as a flux at the Londonderry furnace, which was in operation for thirty-eight days only, in 1908. The shipments from the Helen mine at Michipicoten were also somewhat less than in 1907.

The magnetites represent shipments mainly from eastern Ontario, but include in 1907 shipments from Atikokan, as well as small shipments from the Barachois mine, Cape Breton, and Texada island, B.C.; while in 1908 a small shipment of magnetite was made from the deposit being developed at Moose mountain, Ontario.

The hematites include the ores mined at Torbrook and Acadia mines, Nova Scotia (from the latter of which the carbonate ores are also obtained), and the Helen mine, Michipicoten. The bog ores are obtained and used in the Province of Quebec, but include, in 1907, a small shipment from Quatsino sound in Vancouver island, B.C.

A record of the production of iron ore in past years is shown in Tables 3 and 4 following:—

IRON.—TABLE 3.

Production of Iron Ore by Provinces, 1886-1908.

Calendar Year.	Nova Scotia.	Quebec.	Ontario.	British Columbia.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.
1886	44,388	.....	16,032	3,941	64,361
1887	43,532	13,404	16,598	2,796	76,330
1888	42,611	10,710	16,894	8,372	78,587
1889	54,161	14,533	.....	15,487	84,181
1890	49,206	22,305	.....	.....	76,511
1891	53,649	14,380	.....	950	68,979
1892	78,258	22,690	.....	2,300	103,248
1893	102,201	22,076	.....	1,325	125,602
1894	89,379	19,492	.....	1,120	109,991
1895	83,792	17,783	.....	1,222	102,797
1896	58,810	17,630	15,270	196	91,906
1897	23,400	22,436	2,770	2,099	50,705
1898	19,079	17,873	21,111	280	58,343
1899	28,000	19,420	25,126	2,071	74,617
1900	18,940	19,000	82,950	1,110	122,000
1901	18,619	15,489	272,538	7,000	313,646
1902	16,172	18,524	359,288	10,019	404,003
1903	40,335	12,035	209,634	2,290	264,294
1904	61,293	16,152	141,601	.....	219,046
1905	84,952	12,681	193,464	.....	291,097
1906	97,820	9,933	141,078	.....	248,831
1907	89,839	12,748	207,769	2,500	312,856
1908	11,802	10,103	216,177	.....	238,082

IRON.—TABLE 4.

Production of Iron Ore in Nova Scotia, 1876-1885.

Calendar Year.	Tons.	Calendar Year.	Tons.
1876	15,274	1881	39,843
1877	16,879	1882	42,135
1878	36,600	1883	52,410
1879	29,989	1884	54,885
1880	51,193	1885	48,129

Nova Scotia.—Although there are two important iron smelting centres in this Province, Sydney and Sydney Mines on the one hand, and Londonderry on the other, the latter is the only furnace at which Nova Scotia ores are now used. The Sydney furnaces employ Newfoundland ores almost exclusively. The local ore production is obtained mainly from the Acadia mines at Londonderry, and the Torbrook mines in Annapolis county, both operated by the Londonderry Iron & Mining Co., Ltd. The total shipments in 1908 were only 11,802 tons, as compared with 89,839 tons in 1907, the Londonderry furnace having been shut down the greater part of the year. In 1907 shipments were made from the Brookfield mine and from Barachois, Cape Breton, in addition to the mines already mentioned.

A comprehensive report on the iron ores of Nova Scotia, by Dr. J. E. Woodman, has recently been published by the Mines Branch.

Quebec.—In this Province bog ores are mined in the counties of Champlain, Joliette, Drummond, Nicolet, St. Maurice, and Vaudreuil, and smelted in small charcoal furnaces at Radnor Forges and Drummondville. In 1908, there were 10,103 tons of these bog ores shipped to the above-mentioned furnaces, as compared with 12,748 tons in 1907. Magnetite ores from Ontario are used with these ores in the Radnor furnaces.

Ontario.—In this Province the production was obtained from four mines in 1908, and five in 1907. The largest output is secured from the Helen mine at Michipicoten. This ore, which is mainly a red hematite, is shipped to the blast furnaces at Sault Ste. Marie, Midland, and Hamilton, and to the United States market. About 1,400,000 tons have been shipped during the past nine years.

In the western part of the Province the Atikokan mine was operated during 1907; the ore, a magnetite, being shipped to the new blast furnace at Port Arthur. Neither mine nor furnace, however, was worked during 1908.

The Moose Mountain mine, thirty miles north of Sudbury, which has been undergoing development for several years, made a small shipment in 1908. The ore, a magnetite, is shipped via the Canadian Northern railway to Key Harbour, a part on Georgian bay, whence shipments can be made to any of the lake ports. This mine will probably supply a considerable tonnage of ore during the next few years.

In eastern Ontario, shipments of magnetite were made in 1907 from the Wilbur and Radnor mines on the Kingston and Pembroke railway, and from the Mineral Range mine on the Central Ontario railway, to the blast furnaces at Sault Ste. Marie, Midland and Deseronto, Ont., and Radnor Forges, Que., small quantities being also shipped to the Ontario Iron & Steel Co., at Welland, Ont., and to the Electric Reduction Co., at Buckingham, Que. In 1908 the Radnor mine was not operated; the Mineral Range mine was worked under lease by the Canada Iron Furnace Co., shipments being made to their furnaces at Midland and Radnor Forges, Que.; while the output from the Wilbur mine was shipped to Sault Ste. Marie.

British Columbia.—This Province is not as yet an important producer of iron ore. Small shipments have been made from time to time, chiefly from Tex-

ada island. This ore is a magnetite, and about 1,000 tons are reported as having been shipped in 1907; in addition, about 1,500 tons of bog ore were shipped from Quatsino sound according to the provincial mineralogist. No shipments were made in 1908.

Following is a list of the principal producers of iron ore:—

Name of Owner.	Address.	Name of Mine.	Location of Mine.
Nova Scotia Steel & Coal Co., Ltd.	New Glasgow, N.S.	Barachois	Barachois, C.B.
Londonderry Iron & Mining Co.	Montreal, Que	Acadia	Colchester co., N.S.
		Brookfield	Colchester co., N.S.
		Torbrook	Annapolis, N.S.
*J. McDougall & Co.	Montreal, Que.	Bog ores	Drummond, Nicolet and other counties.
*Canada Iron Furnace Co.	Montreal, Que.	Bog ores	
*Canada Iron Furnace Co.	Montreal, Que.	Radnor	Gratton tp., Renfrew county, Ont.
Wilbur Iron Ore Co., Ltd.	Toronto, Ont.	Wilbur mine	Levant tp., Lanark county, Ont.
Mineral Range Iron Mining Co., Ltd.	Bessemer, Ont.	Mineral range	Mayo tp., Hastings county, Ont.
The Lake Superior Corporation.	Sault Ste. Marie, Ont.	Helen mine	Michipicoten, Ont.
Moose Mountain, Ltd.	Selwood, Ont.	Moose mountain	Hutton tp., Nipissing dist., Ont.
Atikokan Iron Co., Ltd.	Port Arthur, Ont.	Atikokan	Rainy River dist., Ont.
Puget Sound Iron Co.	Van Anda, B.C.		Texada island, B.C.
		Bog ore	Quatsino sound, B.C.

* Consolidated under the Canada Iron Corporation, Limited.

IMPORTS AND EXPORTS.

During the past thirteen years the iron smelting industry in Canada has had to draw more and more upon imported supplies of iron ore, a large portion of these supplies being, however, derived from Newfoundland, which can hardly be looked upon as a foreign source. Still for purposes of commerce it has to be so considered.

The total consumption of iron ore in Canadian furnaces in 1908 was 1,246,144 short tons, made up of 194,699 tons of Canadian ore and 1,051,445 tons of imported ore. The Canadian production was, therefore, only about 19 per cent of our requirements. Previous to 1896 the furnaces were supplied altogether by Canadian ores. The quantities of Canadian and imported ores annually charged to blast furnaces since 1887 are shown in Table 10. The Department of Customs does not separately publish statistics of iron ore imports.

Since the opening of the Helen mine at Michipicoten considerable quantities of iron ore have been exported to the United States. The statistics of exports for both calendar and fiscal years are shown in the two tables following, the statistics for the fiscal year having been added, to compare with the record of imports of iron ore into the United States from Canada, as published in the 'Foreign Commerce and Navigation of the United States,' Washington, D.C., and shown in Table 6a. It so happened that from 1901 to 1906 the figures in the Canadian reports were inaccurate, owing to reasons explained in footnotes to the tables.

IRON.—TABLE 5.

Exports of Iron Ore. Calendar Years, 1893-1908.

Calendar Year.	Tons.	Value.	Calendar Year.	Tons.	Value.
		$			$
1893	2,419	7,590	1901*	306,199	762,283
1894	.....	21,294	1902*	428,901	1,065,019
1895	1,571	3,909	1903*	368,233	922,571
1896	1,033	1,911	1904*	168,828	401,738
1897	403	811	1905*	168,289	407,881
1898	182	278	1906	74,778	149,177
1899	4,145	9,538	1907	25,901	45,907
1900	5,527	13,511	1908	(a)	.....

* The export figures for the five years indicated are incorrect owing to a duplication of entries.
(a) The figures for the Trade Report for this year include the products, and are, therefore, omitted.

IRON.—TABLE 6.

Exports of Iron Ore. Fiscal Years, 1879-1908.

Fiscal Year.	Tons.	Value.	Fiscal Year.	Tons.	Value.
		$			$
1879	3,562	7,530	1894	1,859	9,026
1880	30,524	76,474	1895	2,315	5,743
1881	44,677	114,850	1896	14	35
1882	43,835	135,463	1897	1,320	2,492
1883	44,914	138,775	1898	360	402
1884	25,308	66,549	1899	1,849	4,968
1885	54,367	132,074	1900	4,327	7,689
1886	7,542	23,069	1901*	58,401	150,657
1887	23,345	71,934	1902*	525,983	1,303,901
1888	13,544	39,945	1903*	293,510	733,230
1889	24,752	60,289	1904*	253,850	579,883
1890	13,811	31,376	1905*	224,908	540,909
1891	14,648	32,582	1906*	148,040	345,540
1892	7,707	36,935	1907†	34,191	65,367
1893	7,811	26,114	1908	26,310	46,686

* See footnote to Table 5. † Nine months ending March 31, 1907.

IRON.—TABLE 6a.

Imports of Iron Ore into the United States from Canada, 1893-1908.*

Year ending June 30.	Short Tons.	Value.	Year ending June 30.	Short Tons.	Value.
		$			$
1893	7,706	17,186	1901	34,453	76,159
1894	301	756	1902	309,527	685,540
1895	2,681	10,114	1903	144,725	320,263
1896	39	142	1904	126,995	283,765
1897	2,535	5,243	1905	120,241	245,623
1898	1,313	2,904	1906	113,809	220,112
1899	2,585	5,120	1907	34,731	52,765
1900	4,477	5,550	1908	32,124	55,617

* Compiled from the 'Foreign Commerce and Navigation of the United States.'

PIG IRON AND STEEL.

The total production of pig iron in Canadian furnaces in 1908 was 630,835 short tons (563,246 long tons) valued at the furnace at $8,111,194, as compared with a production of 651,962 short tons (582,109 long tons) valued at $9,125,226 in 1907, and 598,411 short tons (534,296 long tons) valued at $7,955,136 in 1906. The year 1907 was a year of maximum output in the Canadian iron industry. The business depression of 1908, following the financial panic of that year in the United States, resulted in a falling off of only 21,127 tons, or 3·2 per cent in the output of pig iron in Canada in 1908. This decrease is insignificant compared to that which took place in the United States, where the pig iron production in 1908 was over 38 per cent less than the production in 1907.

These figures of production do not include the output from two electric furnace plants making ferro-products, situated at Welland, Ontario, and Buckingham, Que., of which returns were not received.

Of the total output of pig iron during 1908 about 6,709 tons valued at $171,383 were made with charcoal as fuel, and 624,126 tons valued at $7,939,811 with coke. In 1907 the quantity made with charcoal was 10,047 tons valued at $232,004, and with coke 641,915 tons valued at $8,893,222.

According to the American Iron and Steel Association, which has collected and published statistics of iron and steel production in Canada, the production of basic pig iron in 1908 amounted to 375,659 short tons, as against 382,208 short tons in 1907; and the production of Bessemer pig iron was 198,347 short tons in 1908, as against 173,499 tons in 1907.

The total production of pig iron in 1907 and 1908 is shown by provinces in the following table, the average values per ton being also indicated. In the case of Nova Scotia a large proportion of the pig iron is directly converted to steel, and in large part the value is estimated and does not necessarily represent a market value. The Quebec production is entirely charcoal iron of a high grade.

IRON.—TABLE 7.

Production of Pig Iron by Provinces, 1907-8.

Province.	1907.			1908.			Percentage increase or decrease in quantity.
	Tons.	Value.	Value per ton.	Tons.	Value.	Value per ton.	
		$	$		$	$	Per Cent.
Nova Scotia	366,456	4,211,913	11 49	352,642	3,554,540	10 08	(d) 3·7
Quebec	10,047	232,004	23 09	6,709	171,383	25 55	(d) 33·2
Ontario	275,459	4,681,309	16 99	271,484	4,385,271	16 15	(d) 1·4
Total	651,962	9,125,226	13 99	630,835	8,111,194	12 86	(d) 3·2

The proportions of the whole contributed by the several provinces were, in 1908: Nova Scotia, 56 per cent; Ontario, 43 per cent; and Quebec about 1 per cent. The provinces have maintained this relative order of importance in pig iron production during the past eight years. During the past four years the production has exceeded half a million tons annually; while from 1898 to 1904 the production ranged from 100,000 tons to 300,000 tons per annum.

Statistics of the total production of pig iron since 1887 by provinces are given in Table 8.

IRON.—TABLE 8.

Annual Production of Pig Iron by Provinces, 1887-1908.

Year.	Nova Scotia.		Ontario.		Quebec.		Total.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
		$		$		$		$
1887	19,320	250,000			5,507	116,192	24,827	366,192
1888	17,556	211,403			4,243	101,832	21,799	313,235
1889	21,289	383,202			4,632	116,670	25,921	499,872
1890	18,382	262,608			3,390	69,080	21,772	331,688
1891	21,353	309,527			2,538	59,374	23,891	368,901
1892	40,049	583,556			2,394	53,865	42,443	637,421
1893	46,472	553,408			9,475	236,875	55,947	790,283
1894	41,344	449,533			8,623	196,914	49,967	646,447
1895	35,192	417,083			7,262	169,653	42,454	586,736
1896	32,351	400,829	28,302	368,942	6,615	154,358	67,268	924,129
1897	22,500	230,000	26,115	291,466	9,392	217,235	58,007	738,701
1898	21,627	221,677	48,253	530,789	7,135	159,929	77,015	912,395
1899	31,100	404,300	64,749	808,157	7,094	164,849	102,943	1,377,306
1900	28,133	421,995	62,387	938,725	6,055	140,978	96,575	1,501,698
1901	151,130	1,764,017	116,371	1,599,413	6,875	149,493	274,376	3,512,92?
1902	237,244	2,477,767	112,688	1,584,273	7,970	181,501	357,902	4,243,541
1903	201,246	2,186,273	87,004	1,345,464	9,635	210,973	297,885	3,742,710
1904	164,488	1,760,130	127,845	1,746,126	11,121	241,729	303,454	3,687,985
1905	261,014	2,440,722	256,704	3,868,197	7,588	166,267	525,306	6,475,186
1906	315,008	3,439,217	275,558	4,338,275	7,845	177,644	598,411	7,955,136
1907	365,456	4,211,913	275,459	4,581,309	10,047	232,004	651,962	9,125,226
1908	352,642	3,554,540	271,484	4,385,271	6,709	171,383	630,835	8,111,194

1

The quantities of iron ore, coke, charcoal, limestone, etc., consumed in blast furnaces in 1907 and 1908 are shown as follows:—

IRON.—TABLE 9.

Ore, Fuel, and Flux charged to Blast Furnaces, in years 1907-8.

	1907.			1908.		
	Quantity	Value.	Canadian and Imported.	Quantity.	Value.	Canadian and Imported.
		$	Per Cent.		$	Per Cent.
Canadian iron ore and mill cinder..... tons.	244,104	726,633	18	209,266	741,491	17
Imported iron ore..... "	1,117,260	2,433,921	82	1,051,445	2,132,484	83
Canadian coke..... "	521,068	1,654,079	61	492,076	1,604,411	60
*Imported coke..... "	327,082	1,731,098	39	325,670	1,525,714	40
Charcoal ..... bushels	1,682,085	128,495	.....	1,121,990	85,738	.....
Canadian limestone..... tons.	395,503	298,097	81	418,661	289,705	87
Imported " ..... "	92,959	77,738	19	64,404	53,436	13

*Including coke made from imported coal.

Previous to 1896 the pig iron made was entirely from Canadian ore. Since that date, however, increasing quantities of imported ore have been used, as well as imported fuels and fluxes, until in 1908 about 83 per cent of the ore charged, 40 per cent of the coke, and 13 per cent of the limestone were imported. This condition is, of course, due not to non-existence of the raw materials in the country; but rather to questions of costs and transportation affecting each furnace.

Thus at Sydney, N.S., the ore used is practically all imported from Newfoundland, while the fuel and flux are of Canadian origin. At Londonderry the industry is based entirely on Canadian materials, as is also the case in Quebec province. In Ontario a portion of the ore is imported—65 per cent of the charge in 1908—the coke fuel is all imported, and in the cases of the furnaces at Sault Ste. Marie and Port Arthur the flux is imported.

Statistics showing the quantities of ore, fuel, and flux, charged to Canadian blast furnaces since 1887, are shown in the following table:—

IRON.—TABLE 10.

Iron Ore, Fuel, and Flux charged to Furnaces since 1887.

Calendar Year	Iron Ore Charged.		Fuel Charged.			Limestone
	Canadian (a)	Imported.	Charcoal.	*Coke from Canadian Coal.	Imported Coke.	
	Tons.	Tons.	Bush.	Tons.	Tons.	Tons.
1887	60,434	.....	940,400	33,581	.....	17,171
1888	54,956	.....	804,286	30,228	.....	16,857
1889	65,670	.....	755,800	36,333	.....	22,122
1890	57,304	.....	589,860	34,073	.....	18,478
1891	60,933	.....	441,812	32,796	.....	11,377
1892	96,948	.....	1,121,365	52,622	.....	22,967
1893	124,053	.....	1,302,720	65,332	.....	27,797
1894	108,871	.....	1,173,970	60,026	.....	35,101
1895	9[illegible]208	.....	789,561	51,629	.....	31,585
1896	96,560	46,300	756,660	50,067	33,980	37,462
1897	53,658	55,722	1,031,800	35,800	27,810	31,273
1898	57,881	77,107	836,400	31,952	50,407	33,913
1899	66,384	120,650	1,928,025	44,844	64,648	51,826
1900	71,341	1 2,642	1,799,737	45,021	59,345	52,966
1901	156,613	361,010	1,835 736	207,835	115,367	169,399
1902	125,664	559, 81	2,146,623	362,208	112,314	293,594
1903	82,035	485,91	2,322,030	330,190	96,540	277,452
1904	180,932	454,671	3,477,470	257,182	130,210	211,278
1905	116,974	861,847	4,404,394	365,897	213,882	369,715
1906	221,733	982,740	2,168,476	462,672	304,676	456,036
1907	244,104	1,117,260	1,682,085	521,068	327,082	438,462
1908	209,266	1,051,445	1,121,990	492,076	325,670	483,065

(a) Includes mill cinder.

*Includes for the first ten years small quantity of coal.

In the tabulated statement showing the total mineral production of Canada, the production of pig iron from Canadian ore only is given. This has been arrived at by separating the total production at each furnace into two classes, viz., pig iron from Canadian ore and pig iron from imported ore, the separation being made on the basis of the Canadian and imported ores entering into the production of pig iron at each respective furnace.

The production during the past thirteen years separated in this way has been as follows:—

Calendar Year.	Pig iron from Canadian ore.	Pig iron from Imported ore.	Calendar Year.	Pig iron from Canadian ore	Pig iron from Imported ore.
	Tons.	Tons.		Tons.	Tons.
1896	40,720	26,548	1903	42,052	255,833
1897	26,200	31,807	1904	68,207	235,157
1898	30,553	46,492	1905	68,170	457,136
1899	34,244	6[illegible]	1906	104,660	493,751
1900	35,387	64,188	1907	107,599	544,363
1901	83,100	191,276	1908	99,420	531,415
1902	71,664	286,238			

Of sixteen completed furnaces fifteen were in blast in 1908, for varying periods of time. The operating companies, with numbers and capacities of furnaces, were as follows:—

Dominion Iron and Steel, Sydney, C.B.: four completed furnaces of 275 tons capacity each per day; operated throughout 1907 and 1908, with the exception of one furnace which was idle during nine and a half months of 1908.

Nova Scotia Steel and Coal Company, Limited, New Glasgow, N.S.: one furnace at Sydney Mines, C.B., of 200 tons capacity; operated throughout 1907, and eleven months of 1908.

Londonderry Iron and Mining Co., Limited, Londonderry, N.S.: one furnace of 100 tons capacity; operated about nine months in 1907, and thirty-eight days in 1908.

John McDougall & Co., Montreal, Que.: two small furnaces of seven and eight tons capacity at Drummondville, Que.; one furnace operated throughout 1907, and both for about half of 1908.

Canada Iron Furnace Company, Limited, Montreal, Que.: one furnace of fifty tons daily capacity at Radnor Forges, Que.; operated throughout 1907, and six months of 1908.

One furnace of 150 tons at Midland, Ont.: operated nine and a half months in 1907, and eleven months in 1908.

Deseronto Iron Company, Limited, Deseronto, Ont.: one furnace with a daily capacity of 50 tons; operated three and a half months in 1907, and two months in 1908.

Hamilton Steel and Iron Company, Hamilton, Ont.: two furnaces, one of 200 tons capacity; operated throughout 1907, and forty-nine days in 1908; a second furnace of 300 tons capacity, operated fifty-two days in 1907, and throughout 1908.

Algoma Steel Company, Limited, Sault Ste. Marie, Ont.: two furnaces at Steelton near Sault Ste. Marie, of 250 tons capacity each; operated ten and a half months in 1907, and seven and a half months in 1908.

The Atikokan Iron Company, Limited, Port Arthur, Ont.: one furnace of 100 tons capacity; operated for about five months in 1907, but idle throughout 1908.

The total daily capacity of the sixteen furnaces is about 2,665 tons.

The number of men employed in 1908 was reported as 1,380, and wages paid, $750,224.

Of the sixteen completed furnaces ten were in blast and six idle on December 31, 1908.

The furnace plants operated by the Canada Iron Furnace Co., and John McDougall & Co., have been consolidated under one general management, known as the Canada Iron Corporation, Ltd.

Very little pig iron is exported from Canada. Considerable quantities are, however, imported. During the twelve months ending March, 1908, the imports of ordinary pig iron were 210,053 tons, valued at $3,448,125, and of charcoal pig, 2,237 tons valued at $45,475. The imports during the fiscal year 1907 (nine months ending March) were 150,127 tons of ordinary pig, valued at $2,280,860, and 30 tons of charcoal pig, valued at $675.

The annual imports of these two classes of pig iron since 1880 are shown in the following table. The duty on pig iron is $2.50 per ton.

IRON. TABLE 11.

Annual Imports of Pig Iron since 1880.

Fiscal Year.	Pig Iron.		Charcoal Pig Iron.		Total.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
		$		$		$
1880	(a) 23,159	371,956			23,159	371,956
1881	(a) 43,630	715,997			43,630	715,997
1882	56,594	811,221	6,837	211,791	63,431	1,023,012
1883	75,295	1,085,755	2,198	58,994	77,493	1,144,749
1884	49,291	653,708	2,893	66,602	52,184	720,310
1885	42,279	545,426	1,119	27,333	43,398	572,759
1886	42,463	528,483	3,185	60,086	45,648	588,569
1887	46,295	554,588	3,919	77,420	50,214	631,508
1888	(b) 48,973	648,012			48,973	648,012
1889	(b) 72,115	864,752			72,115	864,752
1890	(b) 87,613	1,148,078			87,613	1,148,078
1891	(b) 81,317	1,085,929			81,317	1,085,929
1892	(b) 68,918	886,485			68,918	886,485
1893	56,849	682,209	5,944	84,358	62,793	766,567
1894	42,376	483,787	2,906	34,968	45,282	518,755
1895	31,637	341,259	2,780	31,171	34,417	372,430
1896	36,131	394,591	917	11,726	37,048	406,317
1897	25,766	291,788	2,936	35,373	28,702	327,161
1898	37,186	382,103	2,250	23,533	39,436	405,636
1899	44,261	452,911	1,925	19,123	46,216	472,034
1900	49,767	811,490	1,816	38,736	51,583	850,226
1901	35,293	548,033	490	7,121	35,783	555,154
1902	39,978	585,077	38	726	40,016	585,803
1903	91,730	1,338,574	882	16,352	92,612	1,354,926
1904	62,515	894,728			62,515	894,728
1905	71,005	857,879			71,005	857,879
1906	96,797	1,401,047			96,797	1,401,047
1907*	150,127	2,280,860	30	675	150,157	2,281,535
1908	210,053	3,448,125	2,237	45,475	212,290	3,493,600

* Nine months ending March.

(a) Comprises pig iron of all kinds.

(b) These figures appear in Customs reports under heading 'iron in pigs, iron kentledge and cast-iron.'

World's production.—The production of pig iron in other countries is given hereunder for the past four years, in order to show the relative position occupied by Canada in the production of this metal.

IRON.—TABLE 12.

Production of Pig Iron in Principal Countries of the World from 1905 to 1908: metric tons 2,204·62 lbs.

	1905.	1906.	1907.	1908.
	Metric Tons.	Metric Tons.	Metric Tons.	Metric Tons.
United States	23,340,258	25,706,882	26,193,863	16,190,994
Germany	10,987,623	12,478,067	13,045,760	11,813,511
United Kingdom	9,746,221	10,311,778	10,082,638	9,438,477
France	3,077,000	3,319,032	3,588,949	3,391,150
Russia	2,125,000	2,350,000	2,768,220	2,748,000
Austria Hungary	1,372,500	1,403,500	1,405,000	1,380,000
Belgium	1,310,280	1,431,160	1,427,940	1,206,440
Sweden	531,200	552,250	603,100	563,300
Canada	476,549	542,869	591,149	572,283
Spain	383,100	387,500	385,000	375,000
Italy	31,300	30,150	32,000	32,500
Other countries	655,000	650,000	556,900	550,000
Totals	54,035,841	59,163,488	60,680,819	48,271,655

* With the exception of those for Canada these figures are taken from the Mineral Industry, New York, 1908.

FERRO-PRODUCTS.

These are made in small quantities in electric furnaces at Buckingham, Que., and Welland, Ont. The operating companies, however, have not furnished the Department with any returns of production.

At Buckingham the Electric Reduction Company, Ltd., has for a number of years been making ferro-chrome, ferro-silicon, ferro-phosphorus, and other products. At Welland, Ont., the Electro Metals Company, Ltd., has four furnaces of from 1,000 to 1,500 horse-power each, in which ferro-silicon is made, the daily production being from five to eight tons. This firm is also conducting experiments on the reduction of iron ores in electric furnaces.

The imports of ferro-manganese, ferro-silicon, etc., into Canada since 1887 are shown in Table 13, the statistics indicating to some extent the home market for these products.

IRON.—TABLE 13.

Imports of Ferro-Manganese, etc., 1887-1908.

Fiscal Year.	Tons.	Value.	Fiscal Year.	Tons.	Value.
		$			$
*1887	123	1,435	†1898	1,418	22,516
*1888	1,883	29,812	†1899	1,199	23,559
*1889	5,868	72,108	†1900	1,149	39,664
*1890	696	18,895	†1901	1,512	38,954
*1891	2,707	40,711	†1902	6,513	150,027
*1892	1,311	23,930	†1903	6,350	162,710
*1893	529	15,858	†1904	2,975	75,454
*1894	284	9,885	†1905	12,935	240,815
†1895	164	5,408	†1906	15,023	462,739
†1896	652	12,811	†1907 (9 months)	16,414	610,875
†1897	426	9,233	†1908	17,417	612,062

* These amounts include: ferro-manganese, ferro-silicon, spiegel, steel bloom ends and crop ends of steel rails, for the manufacture of iron or steel.

† Ferro-silicon, spiegeleisen, and ferro-manganese.

STEEL.

Returns for the year 1908 from eight companies making steel showed a total output of ingots and castings of 588,763 short tons valued at $10,916,602, as compared with 706,982 tons valued at $15,612,590 from seven companies in 1907. These figures are made up as follows:—

IRON.—TABLE 14.

Production of Steel, 1907 and 1908.

Description.	1907.		1908.	
	Short Tons.	Value.	Short Tons.	Value.
		$		$
Ingots, open-hearth (basic)	459,240	9,157,703	443,442	7,684,277
" Bessemer (acid)	225,989	4,293,791	135,557	2,535,287
Castings, open-hearth	20,602	2,031,380	9,051	617,126
Other steels	1,151	129,716	713	79,912
Total	706,982	15,612,590	588,763	10,916,602

Statistics of production of steel ingots and castings since 1894 are given in the following table, the figures from 1894 to 1906 inclusive having been collected and published by the American Iron and Steel Association, those for 1907 and 1908, being as above.

IRON. TABLE 15.

Annual Production of Steel Ingots and Castings, 1894-1908.

Calendar Year.	Short Tons.	Calendar Year.	Short Tons.	Calendar Year.	Short Tons.
1894	28,767	1899	24,640	1904	169,381
1895	19,040	1900	26,406	1905	451,863
1896	17,920	1901	29,214	1906	639,396
1897	20,608	1902	283,881	1907	706,982
1898	24,125	1903	293,286	1908	508,763

Following is a list of firms making steel:-

Dominion Iron & Steel Co., Sydney, C.B.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.
Montreal Steel Works, Ltd., Montreal, Que.
The Algoma Steel Co., Sault Ste. Marie, Ont.
The Hamilton Steel & Iron Co., Hamilton, Ont.
The Wm. Kennedy Sons., Ltd., Owen Sound, Ont.
The Ottawa Steel Castings Co., Ltd., Ottawa, Ont.
The Ontario Iron & Steel Co., Ltd., Welland, Ont.

The American Iron and Steel Association collects and publishes annually very complete statistics of the production of iron and steel in Canada, as well as in the United States, and we are indebted to this authority[1] for the following statistics of the production of finished rolled iron and steel in Canada:—

'Finished Rolled Iron and Steel.—The production of finished rolled iron and steel in Canada in 1908 amounted to about 496,517 long tons, as compared with about 600,179 long tons in 1907, a decrease of 103,662 tons or over 17·2 per cent. Of the total production in 1908 about 65,505 tons were iron, and about 431,012 tons were steel, against about 81,093 tons of iron and about 519,086 tons of steel in 1907.

'The following table gives the production of leading articles of finished rolled iron and steel in Canada in the last five years:—

Products—Gross Tons.	1904.	1905.	1906.	1907.	1908.
Rails	36,216	178,885	312,877	311,461	268,692
Structural shapes and wire rods	11,195	48,850	48,351	65,541	41,520
Plates and sheets	3,102	4,944	15,202	18,493	11,656
Nail plate	5,030	4,110	2,183	1,720	2,126
All other finished rolled forms	124,495	149,037	193,129	202,964	172,523
Total	180,038	385,826	571,742	600,179	496,517

[1] Annual Statistical Report of the American Iron and Steel Association for 1908, p. 82.

'The following table gives the production of all kinds of finished rolled iron and steel in Canada from 1895 to 1908 in gross tons:—

Years.	Gross Tons.	Years.	Gross Tons.	Years.	Gross Tons.
1895	68,402	1900	199,600	1905	345,826
1896	75,043	1901	112,007	1906	571,742
1897	77,021	1902	161,485	1907	660,179
1898	95,303	1903	129,516	1908	406,517
1899	110,642	1904	180,038		

'Forged Iron and Steel.—The total production of forged iron and steel by rolling mills and steel works in Canada in 1908 amounted to about 14,738 tons, of which about 2,300 tons were iron, and about 12,438 tons were steel.

'Cut Nails and Wire Nails.—In 1908 the rolling mills and steel works in Canada which operated cut nail or wire nail factories, produced about 208,000 kegs of steel cut nails and steel wire nails of 100 pounds each, as compared with about 313,200 kegs in 1907, and about 347,000 kegs in 1906.

'Active Rolling Mills and Steel Works.—In 1908 there were twenty-five works in five provinces which made steel ingots or castings, or rolled iron or steel into finished forms, against twenty-two works in five provinces in 1907, a gain of three works. Of the total in 1908 there were nineteen works which rolled iron or steel into finished forms, and six works which made steel ingots or castings, but not finished forms of rolled iron or steel; while in 1907 the number of works which rolled iron or steel into finished forms was sixteen, and the number of works which did not produce finished rolled forms was six. There were two idle rolling mills and steel works in Canada in 1908.

'Of the twenty-five rolling mills and steel works in Canada which were active in 1908, five were located in Nova Scotia, six in Quebec, twelve in Ontario, one in New Brunswick, and one in Manitoba.'

BOUNTIES.

Bounties on iron and steel made in Canada were provided for by the Dominion government in 1897 (Chapter 6, Statutes of Canada, 1897). This Act was amended in 1899 (Chapter 8, Statutes of Canada, 1899), and again in 1903 (Chapter 68, Statutes of Canada, 1903). The latter Act provided for the payment of bounty until June 30, 1907. On April 27, 1907, a new Act was passed (Chapter 24, Statutes of Canada, 1907), providing for the further payment of bounties from January 1, 1907, to December 31, 1910, and in the case of pig iron made by electric smelting until December 31, 1912. The Act is as follows:—

An Act Respecting Bounties on Iron and Steel made in Canada.

(Assented to, 27th April, 1907.)

His Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. The Governor in Council may authorize the payment out of the Consolidated Revenue Fund of the following bounties on the undermentioned articles when manufactured in Canada for consumption therein, viz.:—

(*a*) In respect of pig iron manufactured from ore, on the proportion from Canadian ore produced during the calendar year:—

1907	$2 10 per ton.
1908	2 10 "
1909	1 70 "
1910	0 90 "

(*b*) In respect of pig iron manufactured from ore, on the proportion from foreign ore produced during the calendar year:—

1907	$1 10 per ton.
1908	1 10 "
1909	0 70 "
1910	0 40 "

(*c*) On puddled bar iron manufactured from pig iron made in Canada during the year:—

1907	$1 65 per ton.
1908	1 65 "
1909	1 05 "
1910	0 60 "

(*d*) In respect of rolled, round wire rods not over three-eighths of an inch diameter, manufactured in Canada from steel produced in Canada from ingredients of which not less than fifty per cent of the weight thereof consists of pig iron made in Canada, on such wire rods made after the thirty-first day of December, one thousand nine hundred and six, six dollars per ton.

(*e*) In respect of steel manufactured from ingredients of which not less than fifty per cent of the weight thereof consists of pig iron made in Canada, on such steel made during the calendar year:—

1907	$1 65 per ton.
1908	1 65 "
1909	1 05 "
1910	0 60 "

2. No bounty shall be paid under the foregoing provisions in respect of iron or steel made in Canada by electric process after the thirty-first day of December, one thousand nine hundred and eight.

1. The Governor in Council may authorize the payment out of the Consolidated Revenue Fund of the following bounties on the undermentioned articles when manufactured in Canada for consumption therein, viz.:—

(*a*) On pig iron manufactured from Canadian ore by the process of electric smelting during the calendar year:—

1909	$2 10 per ton.
1910	2 10 "
1911	1 70 "
1912	0 90 "

(*b*) On steel manufactured by electric process from pig iron smelted in Canada by electricity from Canadian ore during the calendar year:—

1909	$1 65 per ton.
1910	1 65 "
1911	1 05 "
1912	0 60 "

2. Bounty, as on pig iron under this section, may be paid upon the molten iron which in the electric furnace enters into the manufacture of steel by the direct process, the weight of the steel so manufactured.

3. No bounty shall be paid on steel ingots from which steel blooms and billets for exportation from Canada are manufactured.

4. The Governor in Council may make regulations to carry out the intention of this Act.

5. The Minister of Trade and Commerce shall be charged with the administration of this Act.

6. Chapter 8 of the Statutes of 1899, Chapter 68 of the Statutes of 1903, and Chapter 39 of the Statutes of 1904, are repealed.

7. This Act shall be deemed to have come into force on the first day of January, one thousand nine hundred and seven.'

The amount of bounties paid on iron and steel during the calendar years 1907 and 1908, as kindly furnished by the Department of Trade and Commerce, was as follows:—

IRON.—TABLE 16.

Bounty paid during the Calendar Years 1907 and 1908.

Product on which Bounty was paid.	1907		1908.	
	Tons.	Bounty.	Tons.	Bounty.
		$		$
Pig iron made from Canadian ore	95,914 97	201,421 47	101,647	213,458 34
" " " imported ore	537,803 45	591,583 80	517,427	569,169 93
Total pig iron	633,718 42	793,005 27	619,074	782,628 27
Steel ingots	666,589 87	1,099,873 37	556,289	917,876 63
Steel wire rods	68,736 22	412,417 26	49,630	297,778 68
Totals	1,369,044 51	2,305,295 90	1,224,993	1,998,283 58

The amount of bounties paid to the several companies, and the quantities of the different products on which the bounties were paid, as compiled from the reports of the Auditor General, are shown in the accompanying tables for the fiscal period of nine months ending March, 1907, and twelve months ending March, 1908.

Bounties paid on Pig Iron manufactured in Canada during nine months ending March, 1907.

Company.	On Pig Iron from Canadian Ore.		On Pig Iron from Imported Ore.		Total Bounties.
	Tons.	Bounties.	Tons.	Bounties.	
		$ cts.		$ cts.	$ cts.
Algoma Steel Co., Ltd.	16,567·49	21,568 50	99,533·63	83,087 44	104,655 94
Canada Iron Furnace Co., Ltd.:					
Midland, Ont.	1,657·38	2,640 70	24,407 34	20,712 54	23,353 24
Radnor Forges, Que.	2,760·06	3,986 49	1,635 32	1,453 62	5,440 11
Deseronto Iron Co., Ltd.	585·00	405 5	3,135 00	2,194 50	2,598 75
Dominion Iron and Steel Co., Ltd.			161,754·42	135,631 23	135,631 23
Electric Reduction Co., Ltd.	112·00	235 20			235 20
Hamilton Steel and Iron Co., Ltd.	815·38	32,027 42	24,974 71	21,714 48	53,741 90
Londonderry Iron and Mining Co., Ltd.	013·98	28,505 79			28,505 79
John McDougall & Co.	1,412·63	2,062 58			2,062 58
Nova Scotia Steel and Coal Co.			33,600·60	29,006 54	29,006 54
	67,223·92	91,430 93	349,041·02	293,800 35	385,231 28

Bounty paid on Steel Ingots and Puddled Iron Bars, during nine months ending March, 1907.

Company.	Tons.	Bounty.
		$ cts.
Algoma Steel Co., steel ingots.	191,734·62	243,636 54
Dominion Iron and Steel Co., steel ingots.	188,825 52	234,844 28
Hamilton Steel and Iron Co., steel ingots.	39,582·43	50,220 47
" " " puddled iron bars	296 82	311 66
Nova Scotia Steel and Coal Co., steel ingots.	34,789·09	46,557 84
	455,228·48	575,570 79

Bounties paid on articles manufactured from Steel, during nine months ending March, 1907.

Company.	Tons.	Bounties.
		$ cts
Dominion Iron and Steel Co., Ltd., Sydney, C B., steel wire rods (not more than ¾" diameter) at $6	49,761·175	298,567 05
Hamilton Steel and Iron Co., angles, etc., at $3.	7,134 740	21,404 22
Montreal Rolling Mills Co., angle bars, at $3.	293 730	881 19
Nova Scotia Steel and Coal Co., Ltd., angles and plates, at $3.	6,048·830	18,146 51
		338,998 97

Bounties paid on Pig Iron manufactured in Canada, Fiscal Year 1907-8.

Company.	On Pig Iron from Canadian Ore.		On Pig Iron from Imported Ore.		Total Bounties.
	Tons.	Bounties.	Tons.	Bounties	
		$ cts.		$ cts.	$ cts.
Algoma Steel Co., Ltd.	29,462 07	61,370 36	122,399 32	134,639 26	196,509 62
Atikokan Iron Co., Ltd.	8,258 22	17,210 46	.....	.....	17,210 46
Canadian Iron Furnace Co., Ltd.:					
Midland, Ont.	6,591 68	13,842 52	21,346 70	23,481 38	37,323 90
Radnor Forges, Que.	5,211 60	10,944 36	2,677 13	2,944 86	13,889 22
Deseronto Iron Co., Ltd.	938 00	1,969 80	4,845 00	5,329 50	7,299 30
Dominion Iron and Steel Co., Ltd.	33 60	70 56	317,399 76	349,139 74	349,210 30
Hamilton Steel and Iron Co., Ltd.	37,083 00	77,874 28	52,079 85	57,287 81	135,162 09
Londonderry Iron and Mining Co., Ltd.	17,829 29	37,441 52	.....	.....	37,441 52
John McDougall & Co.	2,556 25	5,368 12	.....	.....	5,368 12
Nova Scotia Steel and Coal Co., Ltd.	458 00	961 80	57,673 11	63,440 42	64,402 22
	108,421 71	227,553 78	578,420 87	636,262 97	863,816 75

Bounties paid on Steel Ingots and Steel Wire Rods, Fiscal Year 1907-8.

Company.	Steel ingots at $1.65.		Steel wire rods at $6.	
	Tons.	Bounty.	Tons.	Bounty.
		$ cts		$ cts.
Algoma Steel Co., Ltd.	204,555 08	337,515 88	.....	.....
Dominion Iron and Steel Co.	322,769 81	532,570 20	57,855 81	347,134 89
Hamilton Steel and Iron Co., Ltd	52,926 20	87,328 22	.....	.....
Lake Superior Iron and Steel Co.	10,606 42	17,500 60	.....	.....
Nova Scotia Steel and Coal Co.	70,929 73	117,034 04	.....	.....
Ontario Iron and Steel Co.	152 59	251 77	.....	.....
	661,939 83	1,092,200 71	57,855 81	347,134 89

Total bounties paid to each company for the nine months ending March 31, 1907, and for the Fiscal Year ending March 31, 1908.

Corporations.	1907.	1908.
	$ cts.	$ cts.
Algoma Steel Co., Ltd	348,292 48	534,025 50
Atikokan Iron Company, Ltd		17,210 46
Canada Iron Furnace Co., Ltd	28,793 35	51,213 12
Deseronto Iron Co., Ltd	2,598 75	7,299 30
Dominion Iron and Steel Co., Ltd	669,042 56	1,228,915 39
Electric Reduction Co., Ltd	235 20	
Hamilton Steel and Iron Co., Ltd	125,678 25	222,490 31
Londonderry Iron and Mining Co., Ltd	28,505 79	37,441 52
John McDougall & Co	2,062 58	5,368 12
Lake Superior Iron and Steel Co		17,500 60
Montreal Rolling Mills Co	881 19	
Nova Scotia Steel and Coal Co., Ltd	93,710 89	181,436 26
Ontario Iron and Steel Co		251 77
	1,299,801 04	2,303,152 35

EXPORTS AND IMPORTS OF IRON AND STEEL GOODS.

The value of the exports of iron and steel products from Canada in 1908 was $2,098,138, as compared with $1,607,368 in 1907. Details are shown in Table 17 below.

IRON.—TABLE 17.

Exports of Iron and Steel goods the product of Canada during the Calendar Years 1907 and 1908.

		1907.		1908.	
		Quantity.	Value.	Quantity.	Value.
			$		$
Stoves	No.	698	8,077	651	8,258
Castings, N.E.S	$		33,595		28,062
Pig iron	Tons.	439	13,504	290	10,614
Machinery (linotype machines)			33,926		126,590
" N.E.S			456,793		285,257
Sewing machines	No.	4,193	77,272	9,697	103,902
Typewriters	"	5,120	163,719	3,720	169,939
Scrap iron and steel	Cwt.	220,229	184,130	92,566	73,807
Hardware, tools, etc	$		48,509		57,631
" N.E.S	"		128,417		59,504
Steel and manufactures of	"		477,766		1,169,674
Totals			1,607,368		2,098,138

The total imports of iron and steel goods, as compiled from the annual reports of Trade and Navigation, are given in Table 19, showing the imports subject to duty, and Table 20, showing the imports free of duty.

The total value of the imports during the fiscal year ending March, 1908, was $61,819,698, as compared with a value of $43,222,626 during the nine months ending March, 1907, and a value of $43,235,380 during the twelve months ending June 30, 1906.

The weights or quantities are in many cases not given, so that it is not possible to state the total tonnage of iron and steel imported. A minimum estimate of the tonnage imported can, however, be arrived at by selecting those items for which the weight is given. This has been done and the results are given in Table 18. It is apparent that the imports of iron and steel during the nine months ending March, 1907, exceeded 783,025 tons; while during the twelve months ending March, 1908, the imports exceeded 1,064,133 tons.

IRON.—TABLE 18.

Imports of some Iron and Steel products of which the quantities are available.

Material.	Nine months ending March, 1907.	Twelve months ending March, 1908.
	Tons.	Tons.
Pig iron	150,157	212,290
Ferro-products and chrome steel	16,582	17,661
Ingots, blooms, billets, puddled bars, etc.	19,150	6,356
Scrap and scrap steel	39,945	69,213
Plates and sheets	107,701	126,172
Bars, rods, hoops, bands, etc.	106,175	98,640
Structural iron and steel	173,411	373,871
Rails and connexions	78,288	52,706
Pipe and fittings	16,637	25,086
Nails and spikes	3,537	2,741
Wire	58,239	57,046
Forgings, castings and manufactures	13,203	22,357
Total	783,025	1,064,133

IRON. TABLE 19.

Imports of Iron and Steel Goods subject to Duty.

Material.		Nine Months ending March, 1907.		Twelve Months ending March, 1908.	
		Quantity.	Value.	Quantity.	Value.
Agricultural implements, N.O.P., viz.:—					
Binding attachments	$	...	...	...	639
Cultivators and weeders	No	1,896	12,912	5,491	44,983
Drills, seed	"	5,269	177,287	2,887	87,334
Farm, road or field rollers	"	117	8,328	123	18,052
Forks, pronged	"	7,817	4,573	11,466	6,548
Harrows	"	5,620	82,759	3,446	50,988
Harvesters, self-binding	"	2,876	315,360	880	85,662
Hay loaders	"	220	10,402	562	26,432
Hay tedders	"	82	3,838	44	1,374
Hoes	"	2,043	613	4,436	1,034
Horse rakes	"	697	14,337	1,117	28,474
Knives, hay or straw	"	5,832	1,047	1,729	1,207
Knives, edging	"	5	23	180	223
Lawn mowers	"	1,321	6,309	2,305	12,884
Manure spreaders	"	2,262	212,783	800	73,407
Mowing machines	"	290	8,815	1,673	47,668
Ploughs	"	17,818	498,144	16,551	438,129
Post hole diggers	"	687	558	1,589	1,019
Potato diggers	"	449	18,147	1,044	41,179
Rakes, N.O.P.	"	4,181	1,142	11,967	3,350
Reapers	"	219	10,895	531	25,688
Scythes	Doz.	736	3,854	2,441	12,951
Sickles or reaping hooks	"	163	289	222	463
Snaths	"	...	...	4	17
Spades and shovels of iron or steel, N.O.P.	"	6,523	22,886	6,469	29,877
Spade and shovel blanks, and iron or steel cut to shape for the same	"	...	...	3,720	5,788
Parts of agricultural implements paying 12½ per cent and 17½ per cent.	$	...	46,235	...	314,193
" " " 12½, 17½ and 20 per cent	"	...	332,263	...	314,598
All other agricultural implements, N.O.P.	"	...	48,147	...	75,259
Anvils and vises	"	...	60,334	...	70,537
Cart or wagon skeins or boxes	Lbs.	405,634	9,917	277,945	7,035
Springs N.O.P. and parts thereof, of iron or steel, for railway, tramway, or other vehicles	Cwt.	57,788	154,418	48,471	129,001

Cart or wagon skeins or boxes	Lbs.	105,634	9,917	277,945	7,035
Springs N.O.P. and parts thereof, of iron or steel, for railway, tramway, or other vehicles	Cwt.	57,788	154,418	48,471	128,001
Axle and axle parts, N.O.P., and axle blanks and parts thereof of iron or steel for railway, tramway, or other vehicles	"	...	...	43,895	136,358
Bar iron or steel, rolled, whether in coils, bundles, rods or bars, comprising rounds, ovals, squares and flats, N.O.P.	"	1,352,400	2,147,709	1,497,690	2,580,823
Butts and hinges N.O.P.	$	...	79,261	...	65,773
Canada plates, Russia iron, tern plate, and rolled sheets of iron and steel coated with zinc, spelter or other metal, of all widths or thicknesses, N.O.P.	Cwt.	237,872	558,091	79,722	262,134
Castings, iron or steel, N.O.P.	$	...	297,824	...	593,672
Cast iron pipe of every description	Cwt.	279,705	360,263	431,634	598,358
Cast scrap iron	Tons	13,852	198,686	26,371	458,489
Chains, coil chains, chain links, and chain shackles of iron or steel of $\frac{1}{16}$ diameter, and over	Cwt.	47,815	159,365	81,991	281,304
Chain, malleable sprocket or link belting for binders	$	...	53,603	(See free list)	...
Chains, N.O.P.	"	...	62,804	...	52,864
Tacks, shoe	Lbs.	5,627	547	16,735	1,033
Nails, brads, spikes and tacks of all kinds, N.O.P.	"	66,221	4,412	269,331	16,346
Engines, etc.:—					
Locomotives for railways	No.	38	180,264	195	1,238,089
Motor cars for railways and tramways	"	...	...	11	12,002
Engines, fire	"	2	1,953	28	19,880
" gasoline	"	1,479	365,535	3,230	693,153
" steam	"	1,972	564,881	4,059	422,585
Boilers, steam	"	...	...	4,517	274,158
" N.O.P.	"	...	...	1,197	67,161
Fire extinguishing machines, including sprinklers for fire protection	$	...	36,270	...	51,014
Fittings, iron or steel, for iron or steel pipe of every description	Lbs.	5,324,865	338,651	7,077,317	499,050
Flat eye-bar blanks, not punched or drilled, for use exclusively in the manufacture of bridges or of steel structural work, or in car construction	Tons	...	...	89	5,224
Ferro silicon, spiegeleisen, and ferro-manganese	"	16,414	610,875	17,417	612,062
Forgings of iron and steel of whatever size, shape, or in whatever stage of manufacture, N.O.P., and steel shafting, turned, compressed or polished and hammered, drawn or cold rolled iron or steel bars or shapes, N.O.P.	Lbs.	3,052,107	151,204	3,021,923	149,219
Hardware, viz.: Builders, cabinet-makers, upholsterers, harness-makers, saddlers and carriage hardware, including curry-combs, N.O.P.	$	...	597,567	...	578,090
Horse, mule and ox shoes	"	...	8,758	...	16,212
Iron or steel billets, weighing not less than 60 lbs. per lineal yard	Cwt.	...	...	297,329	416,163
" ingots, cogged ingots, blooms, slabs, puddled bars, and loops, or other forms, N.O.P., less finished than iron or steel bars, but more advanced than pig iron, except castings	"	383,003	467,551	94,441	135,177
" bridges or parts thereof, iron or steel structural work, columns, shapes or sections, drilled, punched or in any further stage of manufacture than as rolled or cast, N.O.P.	Tons	67,433	194,551	244,992	645,698
Iron in pig	"	150,127	2,280,860	210,053	3,448,125
" charcoal	$	...	256,835	...	336,405
Locks of all kinds	No.	350	531,028	674	912,371
Machines, machinery, etc.:—	$	...	...	...	136,858
Automobiles and motor vehicles of all kinds					
" " " parts of					

Imports of Iron and Steel Goods subject to duty.

Material.		Nine months ending March, 1907.		Twelve months ending March, 1908.	
		Quantity.	Value.	Quantity.	Value.
Fanning mills	No.	1,307	18,202	1,548	23,051
Grain crushers	"	42	1,259	113	2,801
Windmills and complete parts thereof	"	519	27,556	708	36,171
Ore crushers and rock crushers, stamp mills, cornish and belted rolls, rock drills, air compressors, cranes, derricks and percussion coal cutters	$		115,588		178,951
Portable machines :—					
Fodder or feed cutters	No.	415	5,023	203	2,302
Horse-powers for farm purposes	"	12	1,269	25	2,321
Portable engines with boilers in combination and traction engines for farm purposes	"	530	583,598	700	1,033,868
Portable sawmills and planing mills	"	38	38,241	21	23,352
Steam shovels	"			14	71,052
Threshing machine separators	"	637	326,439	649	386,583
" " " parts of, including wind-stackers, baggers, weighers, and self-feeders for same, and finished parts thereof for repairs, when imported separately	$				295,427
Threshing machine outfits, when consisting of traction or portable engine and separator	"		36,633		
All other portable machines, N.O.P., and parts	No.	1,056	160,597		96,254
Sewing machines	"	13,317	254,071	16,065	268,198
" " parts of	$				96,745
Slot machines	No.	533	16,547	784	22,569
Machines, typewriting	"	4,420	283,350	7,058	546,068
" type-casting and type-setting, and parts thereof, adapted for use in printing offices	"	15	59,474	109	241,445
Machines specially designed for ruling, folding, binding, embossing, creasing or cutting paper or cardboard, when for use exclusively by printers, bookbinders and by manufacturers of articles made from paper or cardboard, including parts thereof, composed wholly or in part of iron, steel, brass or wood	$			595	135,899
Machines for carding, spinning, weaving or knitting, imported by manufacturers for such purposes	$		157,508		707,949
Lithographic presses and type-making accessories for same	"				38,331
Printing presses	"				277,522
All machinery composed wholly or in part of iron or steel, N.O.P., and iron or steel castings, and iron or steel integral parts of all machinery specified in tariff item 453	"		5,028,063		8,005,310

Printing presses	..	..	..	..	26,522
All machinery composed wholly or in part of iron or steel, N.O.P., and iron or steel castings, and iron or steel integral parts of all machinery specified in tariff item 453	..	..	5,628,063	..	8,005,310

Malleable iron castings	..	..	..	..	..
Nails and spikes, composition and sheathing nails	Cwt.	14,620	51,252	12,788	53,561
Nails and spikes, cut (ordinary builders)	Lbs.	21,192	3,899	17,993	2,862
Railway spikes	Cwt.	48,941	90,105	4,124	10,359
Nail wire of all kinds, N.O.P.	..	..	..	29,850	59,665
Nails and spikes, wrought and pressed, trunk, clout, coopers, cigar box, Hungarian, horseshoe and other nails	"	3,583	12,477	7,870	27,017
Moulboards, or shares or plough plates, land sides and other plates for agricultural implements, cut to shape from rolled plates of steel, but not moulded, punched, polished or otherwise manufactured	Lbs.	137,989	7,452	..	..
Pulleys, belt for power transmission	Cwt.	36,180	100,070	(free list)	..
Pumps, hand, N.O.P.	No.	..	470	..	..
Iron and steel railway bars or rails of any form, punched or not, N.O.P., for railways, which term for the purposes of this item shall include all kinds of railways, street railways and tramways, even although they are used for private purposes only, and even although they are not used or intended to be used in connexion with the business of common carrying of goods or passengers	..	..	153,049	14,566	80,269
Railway fish-plates	Tons.	72,811	1,867,865	49,187	1,278,084
Railway tie-plates	"	4,960	215,045	1,225	55,193
Rolled iron or steel angles, tees, beams, channels, girders and other rolled shapes or sections, not punched or drilled or further manufactured than rolled, N.O.P.	"	..	..	859	46,046
Rolled iron or steel beams, channels, angles and other rolled shapes of iron and steel, not punched, drilled or further manufactured than rolled, weighing not less than 35 lbs. per lineal yard, not being square, flat, oval or round shapes, and not being railway bars or rails	Cwt.	953,024	1,288,390	660,869	1,064,890
Rolled iron or steel angles, beams, channels, building or structural rolled sections or shapes, not punched, drilled or further manufactured than rolled, N.O.P., and flat eye bar blanks not punched or drilled	"	458,975	704,889	1,474,074	2,202,516
Rolled iron or steel hoop, band, scroll or strip, 8" or less in width, No. 18 gauge and thicker, N.E.S.	"	288,392	415,164	..	..
Rolled iron or steel hoop, band, scroll or strip, 12" or less in width, No. 13 gauge and thicker, N.O.P.	"	31,677	54,379	..	..
Rolled iron or steel hoop, band, scroll or strip thinner than No. 18 gauge, N.E.S.	"	28,740	51,790	52,735	99,977
Rolled iron or steel hoop, band, scroll or strip, No. 14 gauge and thinner, galvanized or coated with other metal or not, N.O.P.	"	25,891	73,158	..	..
Rolled iron or steel sheets or plates, sheared or unsheared, and skelp iron or steel, sheared or rolled grooves, N.O.P.	"	28,776	62,670	105,568	285,670
Rolled iron or steel plates not less than 48" wide and exceeding ¼" in thickness	Cwt.	277,333	458,046	317,512	539,229
Rolled iron or steel plates not less than 30" in width and not less than ¼" in thickness, N.O.P.	"	3,163	5,060	..	..
Rolled iron or steel sheets, No. 17 gauge and thinner, N.O.P.	"	342,157	543,283	419,733	666,288
Rolled iron or steel sheets and strips, polished or not, No. 14 gauge and thinner, N.O.P.	"	177,435	300,899	..	..
Rolls of chilled iron or steel	"	83,316	183,429	230,889	581,624
Sad or smoothing hatters' and tailors' irons	"	12,536	32,293	1,998	6,930
Safes, doors for safes and vaults	#	..	11,304	..	7,706
Screws, iron and steel, commonly called 'wood screws,' N.O.P., including lag or coach screws, plated or not, and machine or other screws, N.O.P.	"	..	139,198	..	147,004
	Gross.	167,586	24,561	280,357	41,141

Imports of Iron and Steel Goods subject to Duty—*Continued.*

Material.		Nine months ending March, 1907.		Twelve months ending March, 1908.	
		Quantity.	Value.	Quantity.	Value.
Scales, balances, weighing beams, and strength-testing machines of all kinds	$	.....	106,128	.....	135,464
Shafting, round, steel, in bars not exceeding 2½" diameter	Cwt.	.....	.....	43,387	89,428
Sheets, flat, of galvanized iron or steel	"	240,595	765,816	153,069	484,585
Sheets, iron or steel, corrugated, galvanized	"	2,813	8,982	2,812	9,456
Sheets, iron or steel, corrugated, not galvanized	"	965	1,910	522	2,084
Skates of all kinds, roller or other, and parts thereof	Pairs.	72,397	73,273	114,340	94,616
Skelp iron or steel, sheared or rolled in grooves, imported by manufacturers of wrought iron or steel pipe, for use exclusively in the manufacture of wrought iron or steel pipe in their own factories	Cwt.	669,532	985,335	704,709	1,291,942
Steel billets, N.O.P	"	.....	.....	32,681	48,672
Stoves of all kinds, for coal, wood, oil, spirits or gas	$	.....	383,427	.....	469,887
Stove urns of metal, and dovetails, chaplets and hinge tubes of tin for use in the manufacture of stoves	"	.....	.....	.....	16,267
Swedish rolled iron and Swedish rolled steel nail rods under ½" diameter, for the manufacture of horseshoe nails	Cwt.	14,373	33,766	(Free list.)	.....
Switches, frogs, crossings and intersections for railways	"	10,334	46,550	28,69 :	145,781
Tubing :—					
Wrought or seamless tubing, iron or steel, plain or galvanized, threaded and coupled, or not, over 4" diameter, N.O.P	$	.....	88,733	.....	371,795
Wrought or seamless tubing, iron or steel, plain or galvanized, threaded and coupled, or not, 4" and less in diameter, N.O.P	"	.....	102,858	.....	321,982
Seamless steel tubing, valued at not less than 3½ cents per lb	Cwt.	680	3,045	5,331	29,942
Rolled or drawn square tubing of iron or steel, adapted for use in the manufacture of agricultural implements	$	.....	3,764	.....	7,884
Iron or steel pipe or tubing, plain or galvanized, riveted, [illegible]gated or otherwise specially manufactured, including lockjoint pipe, N.O.P	"	.....	.....	.....	221,140
Boiler tubes of wrought iron or steel, including flues and corrugated tubes for marine boilers	"	.....	309,690	.....	.....
Tubes, seamless steel for bicycles	"	.....	11,560	.....	.....
Tubes of rolled steel, seamless, not joined or welded, not more than 1½" diameter	$	.....	7,952	.....	.....
Iron or steel pipe, not butt or lap welded, and wire bound wooden pipe, not less than 30" internal diameter, when for use exclusively in alluvial gold mining	"	.....	.....	.....	130,265
Tubing, wrought iron or steel, plain or galvanized, threaded and coupled, or not, over 2" diameter, N.E.S	"	.....	264,334	.....	.....

Tubes of rolled steel, seamless, not joined or welded, not more than 1½" diameter	$			1,382		
Iron or steel pipe, not butt or lap welded, and wire bound wooden pipe, not less than 30" internal diameter, when for use exclusively in alluvial gold mining	"					130,265
Tubing, wrought iron or steel, plain or galvanized, threaded and coupled, or not, over 2" diameter, N.E.S	"			264,334		
Tubing, wrought iron or steel, plain or galvanized, threaded and coupled, or not, 2" or less in diameter	"					
Other iron or steel tubes or pipes	"			80,816		
Ware—Agate, granite, or enamelled iron or steel ware	"			61,766		
Ware—Galvanized sheet iron, or of galvanized sheet steel manufactures, N.O.P.	"			124,343		113,407
Ware—Iron or steel hollow ware, plain black or coated, N.O.P., and nickel and aluminium kitchen or household hollow ware	"			23,508		
Wire bale ties	"			70,457		34,217
Wire bound wooden pipe, N.O.P.	Bundles of 250 ties	2,456	4,566	622		693
Wire cloth or woven wire and netting of iron or steel	Lbs.	487,953	33,092	1,559,650		85,769
Wire screens, doors and windows	"	73,523	7,076	146,064		25,089
Wire buckthorn strip fencing, woven wire fencing, and wire fencing of iron and steel, N.O.P., not to include woven wire or netting made from wire smaller than No. 14 gauge, not to include fencing or wire larger than No. 9 gauge	$		8,513			7,377
Wire, iron or steel galvanized 9-12 and 13 gauge	Lbs.	637,805	23,609	1,989,592		57,924
Wire, single or several, covered with cotton, linen, silk rubber or other material, including cable so covered	Cwt.	447,496	458,082			
Wire of iron and steel all kinds, N.O.P.	Lbs.	1,508,528	264,094	2,237,772		442,416
Wire rope, stranded or twisted wire clothes lines, picture or other twisted wire and wire cables, N.O.P.	"	8,610,772	232,263	11,069,983		310,099
Iron or steel nuts, rivets or bolts with or without threads, nut bolt, and hinge blank, and T and strap hinges of all kinds, N.O.P.	"	2,875,631	217,080	5,503,524		408,945
Iron or steel scrap, wrought, being waste or refuse, including punchings, cuttings, and clippings of iron or steel plates or sheets having been in actual use; crop ends of tin plate bars, blooms and rails, the same not having been in actual use	Cwt.	37,653	140,734	48,355		199,218
Penknives, jack-knives, and pocket knives of all kinds	"	569,954	412,666	656,501		705,628
Knives and forks of steel, plated or not, N.O.P.	$		72,541			131,597
All other cutlery, N.O.P.	"		220,689			318,859
Guns, rifles including air guns and air rifles (not being toys), muskets, cannons, pistols, revolvers, or other fire arms	"		277,549			496,726
Bayonets, swords, fencing foils, and masks	"		371,286			630,449
Needles of any material or kind, N.O.P.	"		1,638			4,583
Steel, chrome steel	"		74,020			95,343
Steel plate, universal mill or rolled edge plates of steel over 12" wide, imported by manufacturers of bridges or of structural work, or for use in car construction	Cwt.	3,367	15,826	4,871		21,785
Steel plate universal mill or rolled edge bridge plate imported by manufacturers of bridges	"	46,730	74,789	369,118		415,686
Steel in bars or sheets to be used exclusively in the manufacture of shovels when imported by the manufacturers of shovels	Cwt.	117,593	166,538			
Rolled iron or steel, or cast steel in bars, bands, hoops, scroll or strip, sheet or plate of any size, thickness or width, galvanized or coated with any material or not, and steel blanks for the manufacture of milling cutters, when of greater value than 3½ cts. per lb	"			25,227		48,663
Steel in bars, bands, hoops, scroll or strip, sheet or plates of any size, thickness or width, when of greater value than 2½ cts. per lb., N.O.P.	"	61,582	294,521	74,796		494,585
Steel balls adapted for use in bearings of machinery and vehicles	"	85,301	454,429			
Steel wool	$		5,054			13,718
	Cwt		341	367		1,584

IRON.—TABLE 19—*Continued.*

Imports of Iron and Steel Goods subject to Duty—*Continued.*

Material.		Nine months ending March, 1907.		Twelve months ending March, 1908.	
		Quantity.	Value.	Quantity.	Value.
Tools and implements—					
Adzes, cleavers, hatchets, wedges, sledges, hammers, crowbars, cant-dogs and track tools, picks, mattocks and eyes or poles for the same	$		61,132		76,736
Axes	Doz.	3,114	18,064	5,739	35,383
Saws	$		165,292		181,759
Files and rasps, N.O.P.			71,872		87,046
Tools, hand or machine, of all kinds, N.O.P.			902,191		1,017,391
Knife blades or blanks, and table forks of iron and steel, in the rough, not handled, filed, ground or otherwise manufactured	"		1,175		302
Manufactures, articles or wares of iron and steel, or, of which iron and steel (or either) are the component materials of chief value, N.O.P.	"		3,018,633		3,980,631
Totals			38,444,744		51,485,456

Imports of Iron and Steel Goods free of Duty.

Material.		Nine months ending March, 1907.		Twelve months ending March, 1908.	
		Quantity.	Value.	Quantity.	Value.
Anchors for vessels	Cwt	4,384	14,107	7,067	24,488
Chain, malleable sprocket or link belting	$				185,416
Cream separators, and steel bowls for			404,150		448,569
Cream separators—materials which enter into the construction and form part of when imported by manufacturers of cream separators to be used in the manufacture thereof	$		112,351		136,476
Gas buoys—The following articles and materials, when imported by manufacturers of automatic gas buoys and automatic gas beacons, for use in the manufacture of such buoys and beacons for the Government of Canada or for export, viz., iron or steel tubes over 16" diameter, flanged and dished steel heads made from boiler plate, over 5 feet in diameter; hardened steel balls, not less than 3" diameter; acetelyne gas lanterns and parts thereof, and tobin bronze in bars or rods	$				200,054
Iron or steel, rolled round wire rods, in the coil, not over $\frac{5}{8}$" diameter, when imported by wire manufacturers for use in making wire in the coil in their own factories	Cwt	221,006	305,039	197,247	295,122
Boiler plate of iron or steel not less than 30" width, and not less than $\frac{1}{4}$" thickness, for use exclusively in the manufacture of boilers	"	262,819		262,819	460,423
Flat galvanized iron or steel sheets	"	51,908	174,235	281,850	942,889
Rolled iron and steel, and cast steel in bars, band, hoop, scroll or strip, sheet or plate of any size, thickness or width, galvanized or coated with any material or not, and steel blanks for the manufacture of milling cutters, when of greater value than 3½ cts. per lb.	"			61,243	441,416
Rolled iron or steel sheets in strips, polished or not, 14 gauge and thinner, N.O.P.	"			376,944	980,765
Rolled iron or steel, hoop, band, scroll or strip, No. 14 gauge and thinner, galvanized or coated with other metal or not, N.O.P.	"	3,852	6,746	22,250	47,878
Iron or steel, beams, sheets or plates, ankles, knees, masts or parts thereof, and cable chains for wooden, iron, steel or composite ships or vessels	"	255,062	391,412	173,520	302,351
Locomotive and car wheel tires of steel in the rough	"	74,806	178,427	148,525	341,727
Scrap iron and scrap steel, old, and fit only to be remanufactured, being part of or recovered from any vessel wrecked in waters subject to the jurisdiction of Canada	"	12,000	6,197	200,340	176,518

Imports of Iron and Steel Goods free of Duty.—*Continued.*

Material.		Nine months ending March, 1907.		Twelve months ending March, 1908.	
		Quantity.	Value.	Quantity.	Value.
Machinery:—					
Articles of metal as follows, when for use exclusively in mining and metallurgical operations viz., coal cutting machines, except percussion coal cutters; coal heading machines; coal augurs; rotary coal drills; core drills; miners safety lamps and parts thereof, also accessories for cleaning, filling, and testing such lamps; electric or magnetic machines for separating or concentrating iron ores; furnaces for the smelting of copper, zinc and nickel ores; converting apparatus for metallurgical processes in metals; copper plates, plated or not; machinery for extraction of precious metals by the chlorination or cyanide process; amalgam safes; automatic ore samplers; automatic feeders; retorts; mercury pumps; pyrometers; bullion furnaces; amalgam cleaners; blast furnace blowing engines; wrought iron tubing, butt or lap welded, threaded or coupled, or not, over 4" diameter; and integral parts of all machinery mentioned in this item	$	.....	891,731	.....	1,060,945
Blowers of iron or steel of a class or kind not made in Canada, for use in the smelting of ores, or in the reduction, separation or refining of metals; rotary kilns, revolving roasters and furnaces of metal of a class or kind not made in Canada, designed for roasting ore, mineral rock or clay; furnace slag trucks and slag pots of a class or kind not made in Canada	$	.....	.....	.....	47,687
Appliances of iron or steel, of a class or kind not made in Canada, and elevators and machinery of floating dredges, when for use exclusively in alluvial gold mining	"	.....	124,552	.....	415,930
Well-drilling, and apparatus of a class or kind not made in Canada for drilling for water, natural gas or oil, and for prospecting for minerals, not to include motive power	"	.....	228,138	.....	165,638
Briquette making machines	"	.....	.....	.....	10,130
Newspaper printing presses, of not less value by retail than $1,500 each, of a class or kind not made in Canada	No.	75	257,142	90	361,278
Machinery and tools not manufactured in Canada up to the required standard necessary for any factory to be established in Canada for the manufacture of rifles for the Government of Canada	$	.....	7,166	.....	5,678
All materials, or parts in the rough, unfinished, and screws, nuts, bands and springs to be used in rifles to be manufactured at any such factory for the Government of Canada	"	.....	53,601	.....	15,148
Machinery of every kind, and structural iron and steel for use in the construction and equipment of factories for the manufacture of sugar from beet root	"	.....	29,340	.....	25,804

used in mines to be manufactured at any such factory for the Government of Canada	"				
Machinery of every kind, and structural iron and steel for use in the construction and equipment of factories for the manufacture of sugar from beet root	"		29,340		25,804

Mould boards or shares, or plough plates, land sides, and other plate for agricultural implements, when cut to shape from rolled plates of steel, but not moulded, punched, polished or otherwise manufactured	Cwt.	30,768	88,864	69,851	207,966
Steel balls adapted for use on bearings on machinery, and vehicles	$		1,988		4,405
Steel, rolled, for saws and straw cutters not tempered, or ground, nor further manufactured than cut to shape without indented edges	Cwt.	13,723	126,328	18,115	158,379
Steel strips, and flat steel wire when imported into Canada by manufacturers of buckthorn and plain strip fencing, for use exclusively in their own factories in the manufacture thereof	"	22	83	188	871
Steel wire, Bessemer soft drawn spring of Nos. 10, 12, and 13 gauge, respectively, and homo steel spring wire of Nos. 11 and 12 gauge, respectively, when imported by manufacturers of wire mattresses, to be used exclusively in their own factories in the manufacture of such articles	"	4,656	11,849	9,294	24,202
Steel, crucible sheet, 11 to 16 gauge, 2½" to 18" wide, for the manufacture of mower and reaper knives when imported by manufacturers thereof for use exclusively in the manufacture of such articles in their own factories	"	7,873	35,947	11,433	49,779
Steel No. 20 gauge and thinner, but not thinner than No. 30 gauge, for the manufacture of corset steels, clock springs, and shoe shanks, imported by manufacturers of such articles for exclusive use in the manufacture of such articles in their own factories		253	823	208	1,228
Steel wire, flat, of 16 gauge or thinner, imported by the manufacturers of crinoline, and corset wires and dress stays, for use exclusively in the manufacture of such articles in their own factories	Cwt.	3,391	19,725	3,765	24,631
Steel, No. 12 gauge and thinner, but not thinner than No. 30 gauge, for the manufacture of buckle clasps, bed fasts, furniture casters, and ice-creepers, imported by the manufacturers of such articles, for use exclusively in the manufacture of such articles in their own factories	"	378	3,640	1,520	4,245
Steel No. 24 and 17 gauge, in sheets 63" long and from 18" to 32" wide, when imported by the manufacturers of tubular bow sockets for use exclusively in the manufacture of such articles in their own factories	"	1,508	3,477	2,327	5,832
Steel springs for the manufacture of surgical trusses, when imported by manufacturers of surgical trusses for use exclusively in the manufacture thereof in their own factories	Lbs.	1,454	976	969	706
Swedish rolled iron, and Swedish rolled steel nail rods, under half an inch in diameter, for the manufacture of horse shoe nails	Cwt.			22,360	44,168
Steel seamless tubing valued at not less than 3½ cents per pound	"	230	3,890	1,000	10,465
Steel or iron tubes, rolled, not joined or welded, not more than 1½" diameter, N.O.P.	$				10,423
Seamless steel, or wrought iron boiler tubes, including flues and corrugated tubes for marine boilers	$				655,203
Barbed fencing wire of iron or steel	Cwt.	356,605	815,084	241,520	572,766
Wire, crucible cast steel, valued at not less than 6 cents per lb	Lbs.	1,680,018	77,501	14,340	2,765
Wire, curved or not, galvanized iron or steel, Nos. 9, 12, and 13 gauge	Cwt.	192,012	402,373	608,039	1,341,416
Wire, steel, valued at not less than 2¾ cents per lb. when imported by manufacturers of rope, for use exclusively in the manufacture of rope	"			35,460	142,467
Totals			4,777,882		10,334,242